

AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Fig. 1. This sheet, which includes Fig. 1, replaces the original sheet including Fig. 1.

REMARKS/ARGUMENTS

Claims 1-15 stand rejected in the outstanding Official Action. Claim 10 has been cancelled without prejudice and claims 1 and 11-15 amended. Therefore, claims 1-9 and 11-15 are the only claims remaining in this application.

The Examiner's acknowledgment of Applicants' claim for foreign priority and receipt of the certified copy of the priority document is very much appreciated. Additionally, the Examiner's consideration of the prior art submitted in Applicants' previously filed Information Disclosure Statements is appreciated.

On page 2, section 2 of the Official Action, the drawings are objected to under the provisions of Rule 83 which requires every feature of the claimed invention to be shown in the drawings. The Examiner correctly notes that the filter "as stated in claim 5" is not shown in the drawings. Applicants enclose herewith an amended sheet of drawings in which a block labeled "filter 9" has been added to Figure 1. Applicants' specification at page 5, line 22 has been amended to reference the filter 9. Inasmuch as originally submitted claim 5 disclosed a filter applied to the detector, this drawing correction adds no new matter and obviates the drawing objection. Consideration and entry of the amended sheet of drawing is respectfully requested and this is believed to obviate the objection to claim 5.

The objections to claims 6 and 8 are respectfully traversed, as the structures referenced are already shown in the drawings as originally filed. With respect to the "detection of ambient light" in claim 6, this ambient light is detected by detector 8 in Figure 1. This detector 8 is shown as not enclosed or otherwise shielded and therefore would receive and detect any ambient

light. Thus, the structure relating to "the detection of ambient light" as recited in claim 6 is detector 8 as shown in the drawings and therefore the drawing objection is respectfully traversed.

With respect to the element "responsible for adaptation of different frequencies" as set out in claim 8, the claim actually identifies two such structures, i.e., "the illumination means" and "the mask." Quite clearly, the source 2 in Figure 1 is part of the illumination means. As discussed in claim 8, it is the illumination means which is adapted to project a plurality of spots at different modulated frequencies, the illumination means is projector 2 which is shown in Figure 1. Claim 8 also specifies that "the mask is adapted such that at each range of distance a different modulated frequency is transmitted to the detector" and this is a reference to the mask 6 and detector 8. Figure 1 shows the projector 2, the mask 6 and the detector 8. Applicants are not sure what additional structure could be illustrated in order to illustrate the subject matter of claim 8 and therefore, any further objection to the drawings regarding claim 8 is respectfully traversed.

Accordingly, with reference to the objections to the drawings, Applicants have amended Figure 1 to clearly disclose the filter 9, but has pointed out where the structures referenced in claims 6 and 8 are already disclosed in Applicant's drawings and discussed in the specification. Any further objection to the drawings is respectfully traversed.

The Patent Office objects to the arrangement of the specification. It is also appreciated that the Examiner has brought the arrangement of the specification to the applicant's attention. It is noted that the objection to the arrangement appears to be an indication that the originally filed specification and drawings (transmitted from WIPO) do not meet the formality requirements of the U.S. Patent and Trademark Office. The Patent Office is reminded that the U.S. Patent and

Trademark Office must comply with all articles of the Patent Cooperation Treaty (PCT) including Article 27. It has been held that:

“if the rule and interpretation of the PTO conflicts with the PCT, it runs afoul of Article 27 of the PCT which provides in part:

- (1) No national law shall require compliance with requirements relating to the form or contents of the international application different from or additional to those which are provided for in this Treaty and the Regulations.” Caterpillar Tractor v. Commissioner, 231 USPQ 590, 591 (EDVA 1986).

The Patent Office has referenced this decision in the Official Gazette dated September 9, 1986 (1070 TMOG 5).

As a consequence, the Patent Office (including the Chief Draftsman’s Office) may not require specification format changes as long as the originally submitted documents comply with the PCT requirements. Inasmuch as this specification and these drawings were forwarded for WIPO, by definition, they meet the PCT requirements (they are not forwarded until they meet PCT requirements.). Therefore, the objection to the Abstract, the specification and the Notice of Draftsman’s Patent Drawing Review is respectfully traversed and reconsideration thereof is respectfully requested.

Notwithstanding the above, applicant has added headings and subheadings to the specification.

In section 4 of the Official Action, the Examiner objects to the title of the invention as not being descriptive. Applicants have amended the title to read "Proximity Sensor Based on Projection of Structured Light." However, Applicant is not wedded to this particular language

and, should the Examiner believe some other language to be more descriptive of the claimed invention, Applicants will certainly consider any new proposal.

Claim 1 is objected to, as the Examiner believes the elements stated in claim 1 should be separated by indentations. Claim 1 has been amended and the amendment reflects the Examiner's requirement for indentations.

Claims 1, 4 and 9 stand rejected under 35 USC §102 as being anticipated by Immega (U.S. Patent 5,726,443). Applicants have amended claim 1 to include the limitations of claim 10 dependent thereon, thereby obviating the rejection of claims 1, 4 and 9 under 35 USC §102.

Claims 2, 3, 5-8 and 10-15 stand rejected under 35 USC §103 as being unpatentable over the Immega reference. Inasmuch as the subject matter of claim 10 has been incorporated into independent claim 1, Applicants will respond to the rejection of amended claim 1 under 35 USC §103 with respect to the Immega reference. Applicants' originally filed independent claim 1 specified "an illumination means for illuminating a scene with an array of spots of light." The subject matter of claim 10 is a specific structural arrangement of a light source and a light guide and is now included in claim 1.

Turning to the Examiner's basis for rejecting former claim 10 (now amended claim 1), the Examiner admits that "the use of substantially reflective sides and projection optics are not explicitly disclosed" in the Immega reference (office action page 7, second paragraph). Thus, the Examiner admits that the subject matter of former claim 10 (and now amended claim 1) is not disclosed in the Immega reference.

The Examiner's sole argument is that it would somehow be obvious to one of ordinary skill in the art "to produce a focused beam of light and to prevent unnecessary loss of any light."

This contention is respectfully traversed. In effect, the subject matter of claim 10, now in independent claim 1, is to specify a light source and a light guide comprising a tube having substantially reflective sides such that in combination with projection optics, an array of distinct images of the light are projected towards the scene. In effect, as described in Applicants' specification, page 8, lines 1-22, the light guide is a kaleidoscope which has the effect of producing multiple distinct reflections of the light source which are then projected to the scene.

In view of the Examiner's admission that Immega fails to contain any such disclosure of this structure or the structural interrelationship between the light source, the light guide and the projection optics, the Examiner is clearly speculating as to what would be obvious to one of ordinary skill in the art. The Examiner provides no evidence to support his contention or speculation. It is this sort of conclusory statement that the Federal Circuit has prohibited in the case of *In re Rouffet*, 47 USPQ2d 1453, 1457-8 (Fed. Cir. 1998) where the Court held that:

"to prevent the use of hindsight based on the invention to defeat patentability of the invention, this court **requires the examiner to show a motivation** to combine the references that create the case of obviousness. In other words, **the Examiner must show reasons** that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed." (emphasis added).

As noted above, the burden is on the Examiner to establish some "reason" or "motivation" for one of ordinary skill in the art to ignore the teachings of single image projection from the Immega reference and instead utilize Applicants' kaleidoscopic combination of elements. The Examiner's failure to cite any prior art which teaches such an "illumination means" is indicative of the absence of any prior art which could be combined with the Immega reference to disclose Applicants' claimed invention. The absence of any prior art disclosure and

the fact that the Examiner admits that the subject matter of claim 10 (now amended claim 1) is not disclosed by the Immega reference, it is submitted that amended claim 1 clearly distinguishes over the prior art and is non-obvious in view thereof.

Moreover, there is simply no disclosure in the Immega reference which teaches the production of an array of "distinct images of the light source" towards the scene (amended claim 1, last line). Even if the Examiner concludes that it would be obvious to use the beam forming means of Immega to product a bright focused single beam of light and thus this teaches away from the claim 10 (now amended claim 1) requirement which produces "an array of distinct images of the light source towards the scene."

In fact, if Immega were to adopt the arrangement of the present invention, the Immega device would cease to function correctly, as multiple spots would be projected to the scene and the detector would detect multiple returns. While Immega does have an embodiment in Figure 9 which shows three separate sources, it also requires that when projecting multiple sources there is a need to be able to discriminate their origin. (See Immega column 17, lines 9-14 and 22-24). As a result, Immega not only fails to teach a proximity sensor having Applicants' claimed illumination means, but Immega would clearly lead one of ordinary skill in the art away from the claimed combination of elements which, when combined, "project an array of distinct images of the light source towards the scene."

Having responded to all objections and rejections set forth in the outstanding Official Action, it is submitted that remaining claims 1-9 and 11-15 are in condition for allowance and notice to that effect is respectfully solicited. In the event the Examiner is of the opinion that a

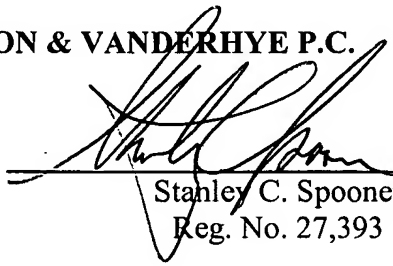
LEWIN et al.
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brief telephone or personal interview will facilitate allowance of one or more of the above claims, he is respectfully requested to contact Applicants' undersigned representative.

Respectfully submitted,

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